Congress apparently determined that they do not need the benefits of Section 224.[170] The fundamental precept of the 1996 Act was to enhance competition, and the amendments to Section 224, like many of the amendments to the 1996 Act,[171] are directed to new entrants.[172] In contrast, Section 224(e), which delineates a new means to allocate costs, does not refer to "telecommunications carriers," but to "attaching entities."[173] Moreover, the term pole attachment is defined in terms of attachments by a "provider of telecommunications service" not as an attachment by a "telecommunications carrier."[174] The Conference Report confirms that Congress concluded that the unusable space "is of equal benefit to all entities attaching to the pole" and intended that the associated costs be apportioned "equally among all such attachments."[175] We thus think the statute draws a clear distinction between those entities that may invoke Section 224 and those entities that count for purposes of allocating the costs of unusable space.[176]

50. We affirm our tentative conclusion that any pole owner providing telecommunications services, including an ILEC, should be counted as an attaching entity for the purposes of allocating the costs of unusable space under Section 224(e)(2).[177] This includes pole owners that use only a part of their physical plant capacity to provide these services and is consistent with our recognition that pole attachments are defined in terms of attachments by a "provider of telecommunication service." Section 224(e)(2) states that the costs of unusable space shall be allocated on the basis of "all attaching entities."[178] There is no indication from the statutory language or legislative history that any particular attaching entity should not be counted.

51. We also believe this conclusion is supported by Section 224(g) which requires that a utility providing telecommunications services impute to its costs of providing service an amount equal to the rate

[170] *See, e.g.*, Section 224(f)(1) (requiring utilities to afford telecommunications carriers non-discriminatory access).

[171] *See Conf. Rpt* at 113 ("Preamble to the 1996 Act").

[172] *Local Competition Order*, 11 FCC Rcd at 15543, para. 83.

[173] 47 U.S.C. § 224(e).

[174] 47 U.S.C. § 224(a)(4).

[175] *Conf. Rpt.* at 206.

[176] 47 U.S.C. § 224.

[177] *See* Adelphia, et al., Comments at 6; AT&T Comments at 9; AT&T Reply at 9; Comcast, et al., Reply at 12; KMC Telecom Comments at 6; MCI Comments at 12; NCTA Comments at 17-18; Summit Comments at 2-3; U S West Comments at 5-6. *But see* American Electric, et al., Comments at 41 (the definition of a telecommunications carrier excludes incumbent ILECs and the definition of pole attachments specifically includes only attachments made by telecommunications carriers or cable operator).

[178] 47 U.S.C. § 224(e)(2).

for which it would be liable under Section 224.[179] This section reflects Congress' recognition that as a provider of telecommunications services, a pole owner uses and benefits from the unusable space in the same way as the other attaching entities. Section 224(g) also directs the utility to impute the costs relating to these services to the appropriate affiliate, making clear that another entity is using the facility and should be counted as an attaching entity. We will count any pole owner providing telecommunications services, including an ILEC, as an attaching entity for the purpose of allocating costs of unusable space.

(3) Government Attachments

52. The *Notice* proposed that government entities with attachments, like other entities present on the utility pole, be counted as entities on the pole for purposes of allocating the costs of unusable space. A utility may be required under its franchise or statutory authorization to provide certain attachments for public use, such as traffic signals, festoon lighting, and specific pedestrian lighting. Often the responsible government agency does not directly pay for the attachment. The Commission proposed that, since the government agency is using space on the pole, its attachments be counted for purposes of allocating the cost of unusable space. This cost would be borne by the pole owner, since it relates to a responsibility under its franchise or statutory authorization.

53. Some cable operators and telecommunications carriers agree with our proposal to count as a separate attaching entity government agencies that have attachments to the pole.[180] Utility pole owners and other telecommunications carriers disagree, stating that the utilities would be responsible for a cost that should be shared by all users of the pole because all parties benefit from the existence of the pole as allowed by the government.[181] Since the agencies do not pay fees to the pole owner, the commenters continue, the utility must unfairly absorb the government agency's share of the cost of unusable space, in addition to the one-third share of the cost for which the pole owner is automatically liable. Still other utility pole owners disagree, asserting that government attachments are not wire attachments, do not provide telecommunications or cable services and are not included in the definition of "pole attachment."[182] In defending its recommendation not to count government attachments, ICG Communications adds that government attachments are normally installed in the pole's unusable space so

[179] 47 U.S.C. § 224(g) states:

> A utility that engages in the provision of telecommunications services or cable services shall impute to its costs of providing such services (and charge any affiliate, subsidiary, or associate company engaged in the provision of such services) an equal amount to the pole attachment rate for which such company would be liable under this section.

[180] *See, e.g.,* AT&T Reply at 9 & 12; Comcast, et al., Reply at 12; KMC Telecom Comments at 6; MCI Comments at 12; NCTA Comments at 19.

[181] *See, e.g.,* Ameritech Comments at 12; Dayton Power Comments at 2; Duquesne Light Comments at 42; ICG Communications Comments at 35; New York State Investor Owned Electric Utilities Comments at 22-23; Ohio Edison Comments at 36,40, Reply at 9-11; Union Electric Comments at 33 & 37, Reply at 9-11.

[182] *See, e.g.,* American Electric, et al., Comments at 41-42; Carolina Power, et al., Comments at 5-6; New York State Investor Owned Electric Utilities Comments at 22-23.

as to avoid interference with other parties' use of the pole space.[183]

54. To the extent that government agencies provide cable or telecommunications service, we affirm our proposal that they be included in the count of attaching entities for purposes of allocating the cost of unusable space. We will not include government agencies in the count as a separate entity if they only provide certain attachments for public use, such as traffic signals, festoon lighting, and specific pedestrian lighting. We conclude that, where a government agency's attachment is used to provide cable or telecommunications service, the government attachment can accurately be described as a "pole attachment" within the meaning of Section 224(a)(4) of the 1996 Act.[184] Like a private pole attachment, it benefits equally from the unusable space on the pole and the costs for this benefit are properly placed on the government entity or the pole owner. Since the government attacher and the pole owner have a relationship that benefits both parties, we are not persuaded that the pole owner is unfairly absorbing the cost of the government's telecommunications attachments to the extent the pole owner's franchise so provides. We will not include a government agency with an attachment that does not provide cable or telecommunications service as an entity in the count when apportioning the costs of unusable space because such an attachment is not a "pole attachment" within the meaning of Section 224(a)(4).[185]

(4) Space Occupied on Pole

55. The *Notice* sought information on alternative methodologies to apportion costs of unusable space, such as by allocating to each entity a proportion of the unusable space equal to the proportion of usable space occupied by the entity's attachment.[186] Specifically, the Commission sought comment on an alternate approach that counts any telecommunications carrier as a separate attaching entity for each foot, or partial increment of a foot, it occupies on the pole. The Commission also asked whether such a methodology is consistent with the statutory requirement in Section 224(e)(2) for equal apportionment among all attaching entities.

56. Based on the record, we reject this alternate proposal. U S West, in opposing the alternate method, argues that if Congress had intended to allocate the costs of unusable space based on space occupied, it would not have distinguished between usable and unusable space.[187] RCN supports the alternative method because, it argues, not all attaching entities benefit to the same degree from the unusable space and those using more space should be allocated more of the costs of unusable space.[188] Similarly, SBC argues that we should consider the amount of space occupied when allocating the costs of unusable space because an attaching entity that occupies two spaces on the pole should be allocated

[183] *See* ICG Communications Comments at 35.

[184] 47 U.S.C. § 224(a)(4).

[185] *Id.*

[186] *Notice*, 12 FCC Rcd at 11735, para. 23.

[187] *See* U S West Comments at 7-8.

[188] RCN Comments at 3-4.

twice as much costs as an attaching entity that only occupies one space.[189]

57. In suggesting the alternative approach that entities using more than one foot be counted as a separate entity for each foot or increment thereof, we sought to ensure that entities be allocated the costs of the unusable space through a means reflecting their relative use. The record does not indicate whether use of more than one foot by an entity will be a pervasive or occasional circumstance. We agree with those parties that state that allocating space in such a manner will add a level of complexity, and not necessarily produce a fairer allocation of the cost of unusable space. We are also convinced that the alternative proposal is inconsistent with the plain meaning of Section 224(e) which apportions the cost of unusable space "under an equal apportionment of such costs among all attaching entities."[190]

58. As another alternative method to apportioning cost equally, MCI argues that the apportionment of two-thirds of the costs of unusable space should be based on the number of attachments rather than the number of attaching entities.[191] Allocating costs by the number of entities, it argues, would not allocate any unusable space to overlashings and will result in an incentive for "speculative" overlashing by existing attachers. We also will not adopt MCI's proposal to count attachments instead of attaching entities. The record does not demonstrate that overlashing leads to distortion of the allocation of the costs of the pole.

c. Overlashing

(1) Background

59. Overlashing, whereby a service provider physically ties its wiring to other wiring already secured to the pole, is routinely used to accommodate additional strands of fiber or coaxial cable on existing pole attachments.[192] The Commission sought information in the *Notice* on how each attaching and overlashing entity should be treated for purposes of allocating the costs of unusable and usable space.[193] We observed that each possible "host attachment" may be overlashed with wiring providing other types of services or owned by other types of providers.[194] The Commission also requested that commenters discuss whether and to what extent overlashing facilitates the provision of services other than cable service by cable operators.[195]

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[189]SBC Comments at 24-25.

[190]47 U.S.C. § 224(e)(2).

[191]MCI Comments at 12.

[192]*See* Comcast, et al., Reply at 8 (cable operators have routinely overlashed for 30 years); NCTA Comments at 5 (overlashing has been a critical component of cable industry's construction strategy for decades).

[193]*Notice*, 12 FCC Rcd at 11732, para. 15.

[194]For example, the utility pole owner, an ILEC, a cable operator, and a telecommunications carrier that already have attachments on the pole may expand their services through overlashing their existing lines, or a third party attachment may overlash any existing attachment, under certain circumstances which we will address in this *Order*.

[195]*Notice*, 12 FCC Rcd at 11732, para. 15.

60. In addressing overlashing in the cable operator context, the Commission issued a public notice in January 1995 (the "*Overlashing Public Notice*")[196] cautioning owners of utility poles against restricting cable operators from overlashing their own pole attachments with fiber optic cable. The Commission noted the serious anti-competitive effects of preventing cable operators from adding fiber to their systems by overlashing. The Commission believed improper constraints were being placed on cable systems that sought to overlash fiber optic lines to their existing coaxial cable lines in order to build out their facilities. While recognizing concerns regarding engineering specifications and arranging for access and notification in cases of emergencies or modification, the Commission affirmed its commitment to ensure that the growth and development of cable system facilities are not hindered by an unreasonable denial of overlashing by a utility pole owner.[197] Overlashing capability continues to be a facet of a pro-competitive market because it maximizes the usable capacity on a pole.[198]

(2) Discussion

(a) Overlashing One's Own Pole Attachment

61. The 1996 Act ushered in an era of transition from regulation to competition in telecommunications markets. The 1996 Act is grounded in the belief that competition will bring the greatest benefits to consumers and the greatest diversity of telecommunications services to communities. These broad aims include those expressed in Section 1 of the Communications Act, to "make available . . . to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide . . . communication service,"[199] and those expressed in the 1996 Act, to establish a "pro-competitive, de-regulatory national policy framework designed to accelerate private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."[200] To implement this framework, the 1996 Act made numerous amendments to the Communications Act, including the expansion of Section 224 jurisdiction to pole attachments for telecommunications carriers and expanded access to utility poles for the purposes of providing cable and telecommunications services.[201] As the Commission has made clear, determining whether actions enhance competition requires examining those actions in light of the significant changes to the laws governing the provision of telecommunications services made by the 1996 Act.[202]

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[196]*Common Carrier Bureau Cautions Owners of Utility Poles, Public Notice*, DA 95-35 (January 11, 1995).

[197]*Id.*

[198]*Local Competition Order*, 11 FCC Rcd at 16075, para. 1161.

[199]47 U.S.C. § 151. These goals date to the original passage of the Communications Act of 1934. *See* H.R. Rep. No. 1918, 73rd Cong., 2d Sess. 1 (1934).

[200]*See* Preamble to 1996 Act.

[201]1996 Act § 703.

[202]*Memorandum Opinion and Order* (In the Applications of NYNEX Corporation and Bell Atlantic Corporation for Consent to Transfer Control of NYNEX Corporation and Its Subsidiaries), FCC 97-286 (released August 14, 1997) at para. 32, 38.

62. We believe overlashing is important to implementing the 1996 Act as it facilitates and expedites installing infrastructure essential to providing cable and telecommunications services to American communities. Overlashing promotes competition by accommodating additional telecommunications providers and minimizes installing and financing infrastructure facilities.[203] We think that overlashing is an important element in promoting the policies of Sections 224 and 257[204] to provide diversity of services over existing facilities, fostering the availability of telecommunications services to communities,[205] and increasing opportunities for competition in the marketplace.[206]

63. Utility pole owners oppose overlashing as an expansion of their obligation to provide for pole attachments and, further, as an unsupervised burden on the poles.[207] Cable operators and telecommunications carriers assert that overlashing is a routine construction practice that has gone on for decades without interference from the pole owners until the utilities began entering competitive businesses.[208] Some telecommunications carriers urge the Commission to bar utility pole owners from prohibiting overlashing.[209]

64. We have been presented with no persuasive reason to change the Commission's policy that encourages overlashing, and we agree with representatives of the cable and telecommunications industries that, to the extent that it does not significantly increase the burden on the pole, overlashing one's own pole attachment should be permitted without additional charge.[210] To the extent that the overlashing does create an additional burden on the pole, any concerns should be satisfied by compliance

[203]*See* ICG Communications Comments at 20; NCTA Comments at 7; RCN Comments at 6-7.

[204]Section 257 provides that the Commission shall seek to promote policies that eliminate market entry barriers for small business and others. 47 U.S.C. § 257.

[205]*See* New York Cable Television Assn. Comments at 7-8; NCTA Comments at 6-7.

[206]*See* Preamble to 1996 Act.

[207]*See* American Electric, et al., Comments at 46; Carolina Power, et al., Comments at 8-9; Colorado Springs Utilities Comments at 3; Dayton Power Comments at 1; Duquesne Light Comments at 26-27; Edison Electric/UTC Comments at 11; New York Investor Owned Electric Utilities Comments at 9-10; Ohio Edison Comments at 24-26; SBC Comments at 8-12; Sprint Comments at 2-3; Texas Utilities Comments at 6; Union Electric Comments at 23-24; USTA Comments at 8. *Cf.* Ameritech Comments at 6-7; AT&T Comments at 5; New York Cable Television Assn. Comments at 4-5; Comcast, et al., Comments at 3-4; ICG Communications Comments at 21; MCI Comments at 8; NCTA Comments at 7.

[208]*See, e.g.,* Comcast, et al., Comments at 3-5; NCTA Comments at 7; New York Cable Television Assn. Comments at 4-5.

[209]*See, e.g.,* ICG Communications Comments at 21; New York Cable Television Assn. Comments at 4.

[210]*See* AT&T Comments at 6; Comcast, et al., Comments at 3-4, 11; New York Cable Television Assn. Comments at 4-5. *But see* ICG Communications Comments at 20-21.

with generally accepted engineering practices.[211] We note that we have deferred decision on the issue of the effect any increased burden may have on the rate the utility pole owner may charge the host attacher. As stated above, we believe that the *Pole Attachment Fee Notice* rulemaking is a more appropriate forum for resolution of this issue.[212] As also stated above, we affirm our current presumptions for the time being. We also do not believe that overlashing is an expansion of a pole owners' obligation. Overlashing has been in practice for many years.[213] We believe utility pole owners' concerns are addressed by Section 224's assurance that pole owners receive a just and reasonable rate and that pole attachments may be denied for reasons of safety, reliability, and generally applicable engineering purposes.

(b) Third Party Overlashing

65. Telecommunications carriers seeking expeditious means to gain access to poles have begun contracting with existing attaching entities to overlash to existing attachments.[214] In the *Notice*, the Commission inquired whether a third party should be permitted to overlash an existing cable system or telecommunications carrier's attachment without the agreement of the pole owner.[215]

66. As stated above, NCTA reports that it is current practice for cable operators routinely to overlash their existing attachments without specific prior notification to the pole owners outside of provisions for major modification contained in their pole attachment agreements.[216] Attaching entities assert that pole owners can exert a veto to market entry if allowed to restrict overlashing of the pole attachment facilities.[217] Utility pole owners object to overlashing by third parties unless the pole owner is compensated for what they view as an additional infringement on their property, but comment that, if third party overlashing is permitted without additional compensation, pole owners should have notice of the nature and engineering requirements of the overlasher.[218]

67. Utility pole owners assert that overlashed attachments must occupy the same amount of space as the initial attachment, be considered a separate attachment, and that the overlasher should be

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[211] *See* 47 U.S.C. § 224(f)(2) (permitting a pole owner to deny access for reasons of safety, reliability and generally applicable engineering purposes).

[212] *See* Section IV.A.1. above (Duquesne Light proposes that any presumptions include weight and wind load factors).

[213] *See* NCTA Comments at 5.

[214] *Local Competition Order*, 11 FCC Rcd at 16075-77, paras. 1161-64.

[215] *Notice*, 12 FCC Rcd at 11732, para. 15.

[216] *See* NCTA Comments at 6.

[217] *See* AT&T Comments at 6; Comcast, et al., Comments at 3-4, 11; New York Cable Television Assn. Comments at 4-8; NCTA Comments at 7.

[218] *See* American Electric, et al., Comments at 46; Bell Atlantic Comments at 2; Dayton Power Comments at 1; Colorado Springs Utilities Comments at 3; GTE Comments at 7; New York State Investor Owned Electric Utilities Comments at 8-9; SBC Comments at 10-12; Sprint Comments at 2-3; USTA Comments at 6-7.

required to pay the same rate as though it were an initial attaching entity.[219] Cable operator and telecommunications carrier interests voice varying opinions on if and how a third party overlasher should be counted as an attaching entity,[220] indicating that cross interests are at stake in facilitating competitive access to the pole, minimizing disruption to existing attachments, and reducing pole attachment fees for the existing attachers.[221]

68. The record does not indicate that third party overlashing adds any more burden to the pole than overlashing one's own pole attachment. We do not believe that third party overlashing disadvantages pole owners in either receiving fair compensation or in being able to ensure the integrity of the pole. Facilitating access to the pole is a tangible demonstration of enhancing competitive opportunities in communications.[222] Allowing third party overlashing will also reduce construction disruption (and the expense associated therewith) which would otherwise likely take place by third parties installing new poles and separate attachments. Accordingly, we will allow third party overlashing subject to the same safety, reliability, and engineering constraints that apply to overlashing one's own pole attachment. Concerns that third party overlashing will increase the burden on the pole can be addressed by compliance with generally accepted engineering practices.

69. We believe that when a host attaching entity allows an overlashing attachment to be installed to its own pole attachment by a third party for the purposes of that third party offering and providing cable or telecommunications services to the public, that third party overlashing entity should be classified as a separate attaching entity for purposes of allocating costs of unusable and usable space[223]

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[219]*See, e.g.,* American Electric, et al., Comments at 46-50. Also commenting that an overlashing entity should be considered an original attaching entity were: Colorado Springs Utilities Comments at 2-3; Edison Electric/UTC Comments at 11; New York State Investor Owned Electric Utilities Comments at 9-10; Sprint Comments at 2; Texas Utilities Comments at 6.

[220]*See* Comcast, et al., Comments at 11 (attaching entity will likely charge the telecommunications overlasher a charge to reflect the unusable space so the overlasher would not be a separate attaching entity); KMC Telecom Comments at 7-8 (no separate payment to pole owner); Summit Comments at 2-3 (charging by number of strands on an attachment would be futile, anti-competitive, and ignore the utility's monopoly obligation to operate for the common good). *But see* Bell Atlantic Reply at 21 (consider overlasher an entity for unusable costs); ICG Communications Comments at 21-22 (consider overlasher an entity for unusable space only); NCTA Comments at 19-20 (if a third party conductor is overlashed to the strand, count that as an entity but charge it only a portion of the support space shared); USTA Comments at 7-8 (overlasher should pay host attacher for the unusable space portion but not usable space portion of pole attachment fee).

[221]The more entities that are counted as attaching entities, generally the lower the pole attachment fee for existing attaching entities is.

[222]*See* Preamble to 1996 Act.

[223]*See* Bell Atlantic Comments at 2-3; Edison Electric/UTC Comments at 14; Carolina Power, et al., Comments at 11; Colorado Springs Utilities Comments at 2-3; Dayton Power Comments at 1; Duquesne Comments at 28; GTE Comments at 7; New York Investor Owned Utilities Comments at 7-9; Ohio Edison Comments at 26; SBC Comments at 18, Reply at 19; Sprint Comments at 2-3; Texas Utilities Comments at 6; Union Electric Comments at 24. *But see* Ameritech Comments at 6-7.

because Congress indicated that the unusable space was of equal benefit to all attaching entities.[224] In order to implement the allocation of unusable space, the third party overlasher will necessarily need to have some understanding or agreement with the pole owner, and an agreement with the host attaching entity. Commenters assert that overlashing under these circumstances should be classified as a separate attachment.[225] We agree.

(c) Lease and Use of Excess Capacity/Dark Fiber

70. Recent technological advances have made it possible for excess capacity within a fiber optic cable, known as "dark fiber," to be leased from an attaching entity by a third party. Dark fiber consists of the bare capacity and does not involve any of the electronics necessary to transmit or receive signals over that capacity. It thus differs from dim or lit fiber by which the carrier provides some or all of the electronics necessary to power the fiber. The Commission requested comment on whether a third party using dark fiber should be counted as a separate pole attaching entity for purposes of establishing the number of attaching entities on a pole among whom to apportion the costs of unusable space.[226]

71. SBC asserts that the Commission should not address the issue of dark fiber because it is the subject of a remand from the U. S. Court of Appeals for the D.C. Circuit.[227] In *Southwestern Bell*, LECs challenged a series of Commission orders finding that the LECs were offering dark fiber on a common carrier basis and prescribing tariffed rates for the service. The petitioners claimed that the Commission exceeded its jurisdiction because they had offered dark fiber only on an individualized basis, thereby placing this service beyond the Commission's authority over common carrier offerings under Title II of the Communications Act.[228]

72. We believe that our jurisdiction to consider the leasing and use of dark fiber to the extent it is used to provide telecommunications services is consistent with the court's holding in *Southwestern Bell*. The court concluded that the Communications Act delegates broad authority to the Commission to regulate constantly evolving communications facilities that have transcended in complexity and power far beyond the specific technologies known to its drafters in 1934.[229] Section 224 gives the Commission the mandate and the jurisdiction to regulate pole attachment rates for facilities over which cable television or telecommunications services are provided, and therefore our consideration of dark fiber in this context is appropriate for this proceeding.

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[224] *Conf. Rpt.* at 206.

[225] *See* Bell Atlantic Comments at 2-3; Edison Electric/UTC Comments at 13-14; Carolina Power, et al., Comments at 8-9; GTE at 7; Sprint Comments at 2-3; Texas Utilities Comments at 5. *But see* Ameritech Comments at 6-7.

[226] *Notice*, 12 FCC Rcd at 11735, para. 25.

[227] *See* SBC Comments at 12-13 (citing *Southwestern Bell Tel. Co. v. FCC*, 19 F.3d 1475 (D.C. Cir. 1994)).

[228] *Southwestern Bell*, 19 F.3d at 1484.

[229] *Id.*

73. There is general consensus among cable operators and telecommunications carriers that the leasing and use of dark fiber by third parties places no additional spatial or physical requirements on the utility pole.[230] Cable operators, telecommunications carriers, and utility pole owners all contend that the use of dark fiber is a pro-competitive, environmentally sound and economical use of existing facilities.[231] We agree and conclude that the leasing of dark fiber by a third party is not an individual pole attachment separate from the host attachment. Such use will not require payment to the pole owner separate from the payment by the host attaching entity.[232] We also agree with cable operators, telecommunications carriers, and utility pole owners[233] that, if an attachment previously used for providing solely cable services would, as a result of the leasing of dark fiber, also be used for providing telecommunications services, the rate for the attachment would be determined under Section 224(e), consistent with our discussion regarding restrictions on services provided over pole attachments.[234]

d. Presumptive Average Number of Attaching Entities

74. The Commission presently uses rebuttable presumptions in the context of establishing reasonable pole attachment rates. These presumptions help to reduce reporting requirements and record-keeping, and are more efficient so there is less administrative burden on all parties. The use of presumptions provides a level of predictability and efficiency in calculating the appropriate rate. Fairness is preserved because the presumptions may be overcome through contrary evidence. We seek to maintain predictability, efficiency and fairness in determining the costs of unusable space on a pole. In the *Notice*, the Commission stated that a pole-by-pole inventory of the number of entities on each pole would be too costly. The Commission proposed that each utility develop, through the information it possesses, a presumptive average number of attachers on one of its poles. The Commission also proposed that telecommunications carriers be provided the methodology and information underlying a utility's presumption. The *Notice* sought comment on this proposal and on whether any parameters should be established in developing the presumptive average. The *Notice* also sought comment on whether a utility should develop averages for areas that share similar characteristics relating to pole attachments and whether different presumptions should exist for urban, suburban, and rural areas. The *Notice* sought

[230] *See* Ameritech Comments at 6; AT&T Comments at 6; Comcast, et al., Comments at 18; ICG Communications Comments at 21; KMC Telecom Comments at 7-8; MCI Comments at 9; NCTA Comments at 7; RCN Comments at 5.

[231] *See, e.g.,* AT&T Comments at 6; Edison Electric/UTC Comments at 13, Reply at 15; GTE Comments at 7-8; KMC Telecom Comments at 7-8; NCTA Comments at 7; New York Cable Television Assn., Comments at 7-8; New York Investor Owned Electric Utilities Comments at 11; U S West Comments at 10.

[232] *See* AT&T Comments at 6; New York Cable Television Assn. Comments at 7-8; Edison Electric/UTC Comments at 13; GTE Comments at 7; ICG Communications Comments at 17-19; KMC Telecom Comments at 7-8; MCI Comments at 6; NCTA Comments at 7; RCN Comments at 5; U S West Comments at 10.

[233] *See, e.g.*, Colorado Springs Utilities Comments at 3; Duquesne Light Comments at 29; Edison Electric/UTC Comments at 13; GTE Comments at 7; NCTA Reply at 12; New York Cable Television Assn., Comments at 7-8; SBC Reply at 6; USTA Reply at 15. *But see* AT&T Comments at 5-6; Comcast, et al., Comments at 18; Sprint Reply at 2-6.

[234] *See* Section IV.A.2 above.

comment on the criteria to develop and evaluate any presumption.[235]

75. The Commission asked whether, as an alternative to pole-by-pole inventory by the facility owners, the Commission should determine the average number of attachments. The Commission inquired as to whether it should initiate a survey to develop a rebuttable presumption regarding the number of attachments. The Commission also sought comment on the difficulties of administering a survey, any additional data required, and parameters of accuracy and reliability required for fair rate determination.[236]

76. Generally, commenters agree with the idea that a presumptive average number of attachers should be developed, but disagree on how this should be accomplished. The utilities generally support developing their own average as the most efficient method.[237] Several attaching entities support the Commission's development of the presumptive average and encourage the establishment of a rebuttable presumption of at least three attachers.[238] Comcast, et al., in particular, encourages a presumptive average of six attaching entities as supported by the Commission's Fiber Deployment Update End of Year 1996 ("*Fiber Deployment Update*").[239] U S West indicates that having the Commission develop the presumptive average will serve efficiency, minimize complaints, and place the burden of rebuttal on the pole owner.[240]

77. We believe that the most efficient and expeditious manner to calculate a presumptive number of attaching entities is for each utility to develop its own presumptive average number of attaching entities. Utilities not only possess this information but have familiarity and expertise to structure it properly. Based on the record, we think the alternative of the Commission undertaking a survey is too cumbersome and would not necessarily enhance accuracy. We do not believe that the *Fiber Deployment Update* is an appropriate resource from which to develop the presumptive average. The *Fiber Deployment Update* presents data about fiber optic facilities and capacity built or used by interexchange carriers, Bell operating companies, and other LECs and competitive access providers. These data are inadequate for the purposes of creating a presumptive average number of attaching entities because it does not include data pertaining to cable operators. Our decision providing that the utility will establish a presumptive number of attaching entities is also premised on the information developed reflecting where the service is being provided, instead of a broad national average. We think there will be a range of presumptive averages depending on rural, urban, or urbanized areas. To ensure that rates are appropriately representative, each utility shall determine a presumptive average for its rural, urban, and urbanized service areas as defined by the United States Census Bureau.

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[235]*Notice*, 12 FCC Rcd at 11735, para. 26.

[236]*Id.* at 11735, para. 27.

[237]*See* American Electric, et al., Comments at 44; Ameritech Comments at 13; Edison Electric/UTC Comments at 24; Carolina Power, et al., Comments at 7; KMC Telecom Comments at 7; MCI Comments at 15; NCTA Comments at 20; New York State Investor Owned Electric Utilities Comments at 24; USTA Comments at 13.

[238]AT&T Comments at 14; Comcast, et al., Comments at 8-10.

[239]Jonathan Kraushaar, *Fiber Deployment Update - End of Year 1996* released by the Common Carrier Bureau of the Federal Communications Commission on August 29, 1997 ("*Fiber Deployment Update*"); *see also* Comcast, et al., Comments at 8-10.

[240]U S West Comments at 9 n.25.

78. We will require each utility to develop, through the information it possesses, a presumptive average number of attaching entities on its poles based on location (urban, rural, urbanized) and based upon our discussion herein regarding the counting of attaching entities for allocating the costs of unusable space. A utility shall, upon request, provide all attaching entities and all entities seeking access the methodology and information by which a utility's presumption was determined. We expect a good faith effort by a utility in establishing its presumption and updating it when a change is necessitated. For example, when a new attaching entity has a substantial impact on the number of attaching entities, the utility's presumptive average should be modified. This method should be consistent with present practice, as we understand most pole attachment agreements "provide for periodic field surveys, generally once every three to seven years, to determine which entities have attached what facilities to whose poles."[241]

79. Challenges to the presumptive average number of attaching entities by the telecommunications carrier or cable operator may be made in the same manner as challenges presently are undertaken. The challenging party will initially be required to identify and calculate the number of attachments on the poles and submit to the utility what it believes to be an appropriate average. Where the number of poles is large, and complete inspection impractical, a statistically sound survey should be submitted. The pole owner will be afforded an opportunity to justify the presumption. Where a presumption is successfully challenged, the resulting figure will be deemed to be the number of attaching entities.

5. Allocating the Cost of Usable Space

a. Background

80. Section 224(e)(3) provides that a utility shall apportion the cost of providing usable space among all entities according to the percentage of usable space required for each entity.[242] The Commission has defined usable space as the space on the utility pole above the minimum grade level[243] that is usable for the attachment of wires, cable, and related equipment.[244] In the *Second Report and Order*,[245] the Commission considered comment regarding the amount of usable space for various size poles in different service areas. The Commission subsequently adopted a rebuttable presumption that a pole contains 13.5 feet of usable space.[246] The usable space presumption has been contested in complaint proceedings before the Commission.[247] In 1986, the Commission revisited the usable space issue and

[241]ICG Communications at 37.

[242]47 U.S.C. § 224(e)(3).

[243]In this context, minimum grade level generally refers to ground level or elevation above which distances are measured for determining required clearances.

[244]47 C.F.R. § 1.402(c).

[245]72 FCC 2d 59.

[246]*Id.* at 69; *Third Report and Order*, 77 FCC 2d at 191-193.

[247]*See, e.g., Cable Information Services, Inc. v. Appalachian Power Co.*, 81 FCC 2d 383 (1980); *Television Cable Service, Inc. v. Monongahela Power Co. v. FCC*, 655 F.2d 1254 (D.C. Cir. 1981).

upheld the presumption.[248] In 1997, the Commission sought comment on the presumptive amount of usable space in the *Pole Attachment Fee Notice*.[249] In the *Notice*, we sought comment on the usable space presumption to establish a full record for attachments made by telecommunications carriers under the 1996 Act.[250] The Commission also proposed to modify the current methodology to reflect only the cost associated with usable space to arrive at a factor for apportioning the costs of usable space for telecommunications carriers under Section 224(e)(3).[251] For allocating the costs of usable space to telecommunications carriers, the following basic formula was proposed:

$$\text{Usable Space Factor} = \frac{\text{Space Occupied by Attachment}}{\text{Total Usable Space}} \times \frac{\text{Total Usable Space}}{\text{Pole Height}} \times \text{Net Cost of Bare Pole} \times \text{Carrying Charge Rate}$$

81. In the *Notice*, the Commission sought comment on the amount of usable space occupied by telecommunications carriers and on whether the presumptive one foot used for cable attachments should be applicable to telecommunications carriers generally.[252] Currently, each attaching entity is presumed to use a specific amount of space, and costs are allocated on the proportion of this space to the overall costs of the usable space. The *1977 Senate Report* evidenced Congress' intent that cable television providers be responsible for 12 inches of usable space on a pole, including actual space on a pole plus clearance space.[253] In 1979, the Commission established the rebuttable presumption that a cable television attachment occupies one foot.[254] The Commission subsequently refined its methodology for determining the amount of usable space and made the one foot presumption permanent.[255] The Commission found this result to be consistent with the legislative history of Section 224, as expressed in the *1977 Senate Report*.[256]

82. Determining the presumptive amount of usable space attributable to each attacher directly impacts the allocation of costs. Section 224(d)(1), which predates the 1996 Act, specifies that the maximum just and reasonable pole rate shall be determined by multiplying the percentage of the total usable space that is occupied by the pole attachment by the sum of the operating expenses and actual

[248] *Pole Attachment Order*, 2 FCC Rcd 4387.

[249] *Pole Attachment Fee Notice*, 12 FCC Rcd at 7458-59, para. 18.

[250] *Notice*, 12 FCC Rcd at 11733, para. 17.

[251] *Id.* at 11737, para. 33.

[252] *Id.* at 11733, para. 19.

[253] *1997 Senate Report* at 20.

[254] *Second Report and Order*, 72 FCC 2d at 69-70.

[255] *Id.*, *see also Usable Space Order* at para. 10.

[256] *Usable Space Order* at para. 10.

capital costs attributable to the entire pole.[257] Each factor is individually determinable, and in some cases has been assigned a presumptive average value for purposes of resolving complaints in an expeditious manner. The current pole attachment rate methodology consists of a usable space factor that is the result of dividing the space occupied on the pole, or the presumptive one foot assigned to a cable attachment, by 13.5 feet or the total amount of usable space.[258]

b. Discussion

(1) Applying the 13.5 Foot Presumption and the One Foot Presumption to Telecommunications Carriers

83. The law provides a method for the allocation of costs associated with the usable space. We believe that the information we received in this proceeding regarding calculation of usable space is more appropriately addressed in the *Pole Attachment Fee Notice* proceeding and we will thus reserve our decision on the total amount of usable space issue until the resolution of that proceeding. For the present time, the presumption that a pole contains 13.5 feet of usable space will remain applicable. We adopt our proposed methodology to apportion the cost of the usable space. We believe this formula most accurately determines the apportionment of the cost of usable space. As mandated by Congress, it incorporates the principle of apportioning the cost of such space according to the percentage of space required for each entity.

84. The Commission's one foot presumption has been in place since 1979. The Commission initially assigned the one foot presumption to cable television operators based on congressional intent, as expressed in the legislative history of Section 224, that cable television was to be assigned only one foot of space, the electric utilities' use of safety space, and an analysis of replacement costs that utilities impose on cable television companies.[259] The Commission concluded in the *Usable Space Order* that several years of experience in regulating pole attachments had not indicated that cable attachments occupy more space than the one foot of usable space as originally contemplated by Congress.[260] Neither the 1996 Act's amendments to Section 224 nor the record in this proceeding suggest that a different presumption should be applicable to telecommunications carriers. Circumstances that are unique or that clearly warrant a departure from the formula may be used to rebut the presumption. We affirm our practice of assigning a presumptive one foot of usable space and find that the presumptive one foot used for cable attachments should be applied to attachments by telecommunications carriers generally. We believe that the one foot presumption remains reasonable and continues to provide an expeditious and equitable method for determining reasonable rates.

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[257] 47 U.S.C. § 224(d)(1).

[258] *See Notice*, 12 FCC Rcd at 11736, para. 29. The current methodology is represented by the following formula:

$$\text{Maximum Rate} = \frac{\text{Space Occupied by Attachment}}{\text{Total Usable Space}} \times \text{Net Cost of Bare Pole} \times \text{Carrying Charge Rate}$$

[259] *Usable Space Order* at para. 10.

[260] *Id.*

85. Some utility pole owners and telecommunications carriers suggest changes to the one foot presumption and express other concerns.[261] Some electric utilities have sought to alter the presumptive amount of usable space allocated when fiber optic cable is involved. For example, Duquesne Light and Ohio Edison contend that, in their service areas, tightly pulled fiber optics will be at the same height at the mid span of the pole as a cable television attachment above it that is hung with the normal required sag.[262] They argue that this is in violation of the NESC code which requires parallel attachments to be separated by appropriate distances between the spans of the poles as well as on the poles themselves.[263] Duquesne Light and Ohio Edison further maintain that, because the tensioned fiber optic cable cannot be easily sagged except by cutting and rerunning the cable, the fiber optic cable must be relocated higher on the pole.[264] They recommend that the Commission adopt a rebuttable presumption that fiber optic cable requires, and should be charged for, two feet of usable space to account for the communications companies' practice of pulling fiber optic cables tightly.[265]

86. The impact of deploying fiber optic cable is dependent upon how the fiber is attached. The rebuttable nature of the one foot presumption offers an opportunity for the presentation of information in situations outside of the norm. The record does not contain sufficient information to base a decision on the impact of the practice of pulling fiber optics cable tightly, and therefore we will not presume that fiber optics require two feet of usable space.

87. We disagree with ICG Communications' position that the Commission's one foot presumption is outdated and should be abandoned.[266] ICG Communications maintains that most communications attachments should only be allocated six inches of usable space.[267] ICG Communications notes that the NESC does not distinguish between cable used for cable operators and cable used for

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[261]Adelphia, et al., Comments at 8; Duquesne Light Comments at 35-36; Ohio Edison at 33; New York State Investor Owned Electric Utilities Comments at 5 (one foot presumption found appropriate for span wire attachments occupying no more than one foot of space on the pole, but inappropriate for attachments occupying more than one foot of usable space); New York Cable Television Assn. Comments at 7 (parties with separately stranded attachments occupying their own (one foot) are responsible for their proportionate share of such space, but where facilities are affixed by additional strands, then the party should be responsible for two feet of usable space); RCN Comments at 7-8.

[262]*See* Duquense Light Comments at 35-36; Ohio Edison Comments at 33. *But see* AT&T Comments at 23 (if the fiber optic is properly deployed, the presumption should remain the same for fiber or any other type cable); Comcast, et al., Reply at 20 (such an approach is an attempt to tax and penalize third party fiber deployment).

[263]*See* Duquense Light Comments at 35-36; Ohio Edison Comments at 33.

[264]*Id.*

[265]*Id.*

[266]ICG Communications Comments at 39.

[267]*Id.* (maintaining that overlashed cable combinations below the safety space should be allocated nine inches of usable space); ICG Communications Reply at 22 (if the Commission makes six inches of usable space the basis for Section 224(e) rates, utilities may stop imposing unnecessary make-ready costs on attaching parties and instead increase their pole attachment revenues by permitting more attaching parties on each pole).

telecommunications carriers.[268] Based on accepted engineering and governmentally-required standards, it advocates six inches of usable space for simple communications attachments below the safety space.[269] ICG Communications notes that where communications lines have been installed in electric supply space, especially fiber optic cables, more than one foot of usable space is required and an allocation of 16 inches of usable space should be made.[270]

88. Bell Atlantic contends that there is no factual support for ICG Communications' claims.[271] Bell Atlantic points to Bellcore's Manual of Construction procedures as demonstrating that clearance at the pole between communications cables supported on different strands of suspension must be at least 12 inches.[272] SBC maintains that ICG Communications' proposals are based on improper assumptions, especially regarding overlashing.[273] SBC maintains that the one foot presumption is still valid today.[274] We agree that ICG Communications has not adequately supported its suggested allocation of six inches of space for most communications attachments or 16 inches for fiber optic cables.

89. Adelphia, et al., express concern regarding the validity of assigning the cost of a vertical one-foot of pole space to cable systems and/or other telecommunications providers without considering the horizontal uses of the pole by the pole owner.[275] Adelphia, et al., also suggest that the particular side of the pole on which the attachment is located is of significance.[276] RCN observes that the one foot presumption should not apply where extension arms or boxing[277] is used by the attaching entity to install its facilities.[278] RCN suggests that where extension arms are used, the communications cable is located not on the pole itself, but farther out on the extension arm. RCN states that this will lead to a situation

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[268] *Id.* at 21.

[269] IGG Communications Comments at 40-43 (concluding that a utility should charge a telecommunications carrier for a foot of usable space only upon agreement of the carrier or by establishing that an applicable governmental requirement dictates a one foot clearance between communications lines and suggesting that utilities be permitted to seek different usable space allocations in their negotiation of pole attachment agreements).

[270] *Id.*

[271] Bell Atlantic Reply at 17.

[272] *Id.* (citing Bellcore, Blue Book - Manual of Construction Procedure, § 3.2 (Issue 2 1996)).

[273] SBC Reply at 26.

[274] *Id.*; *see also* Edison Electric/UTC Comments at 25-26, Reply at 25.

[275] Adelphia, et al., Comments at 8.

[276] *Id.*

[277] RCN describes boxing or "b-bolting" as a process by which an attachment is bolted through the back of a pole, opposite from an existing attachment. RCN Comments at 8.

[278] *Id.* at 7-8. *But see* Comcast, et al., Reply at 20.

where an entity's physical attachment may occupy as little as six inches of usable space.[279] RCN claims that this configuration will still satisfy the 12-inch clearance required between communications attachments, if the cable is positioned a certain distance along the extension.[280]

90. Sufficient record has not been presented to change our presumption as a general matter, although parties are free to challenge the presumption on a case-by-case basis. In striking the proper balance, we must weigh any of the suggested modifications against the advantages of procedures and calculations remaining simple and expeditious.[281] We agree with GTE that changing the usable space presumption would add another layer of complexity to the pole attachment rate formula. As GTE suggests, surveys of the actual space occupied by each attacher would be necessary.[282]

91. We agree with those commenters who have found the presumptive one foot applicable.[283] We further affirm our decision to continue using the current methodology, modified to reflect only costs associated with usable space.[284] Commenters have not persuaded us that the rationale originally used in assigning the one foot of space to cable television operators should not be equally applicable to telecommunications carriers generally. We continue to see the need and basis for the one foot presumption due to the impracticality of developing sufficient information applicable to all situations.[285] Where use of the one foot presumption would not encourage just and reasonable rates, any party may rebut the presumption.

(2) Overlashing and Dark Fiber

92. Consistent with our above discussion regarding overlashing, we find that the one foot presumption shall continue to apply where an attaching entity has overlashed its own pole attachments.[286] We also determine that facilities overlashed by third parties onto existing pole attachments are presumed

[279]RCN Comments at 7-8.

[280]*Id.*; *see also* Bell Atlantic Reply at 18 n.43.

[281]*See* 72 FCC 2d at 69 (citing *1977 Senate Report* at 21-22).

[282]GTE Reply at 15.

[283]Carolina Power, et al., Comments at 12-13; GTE Comments at 13, n.29; MCI Comments at 17 (fiber cable and coaxial cable share the same vertical separation requirements in the NESC, therefore there is no need to treat them differently for space allocation purposes); Ameritech Comments at 9 (there are no differences between cable system facility attachments and telecommunications attachments to warrant different presumptions in the formula for the space required for each); NCTA Comments at 13; Adelphia, et al., Comments at 7; U S West Comments at 5.

[284]*Notice*, 12 FCC Rcd at 11737, para. 33 & n.60 (referencing paras. 15-19 regarding comments sought involving the Commission's usable space presumptions); *see also* Carolina Power, et al., Comments at 15 (asserting that the current formula should be used to establish presumptively applicable maximum charges, provided that the formula is further modified for purposes of Section 224(e)); Ameritech Comments at 10; U S West Comments at 5.

[285]*Notice*, 12 FCC Rcd at 11733, para 19.

[286]See Section IV.A.

to share the presumptive one foot of usable space of the host attachment.[287] To the extent that the overlashing creates an additional burden on the pole, any concerns should be satisfied by compliance with generally accepted engineering practices. We again note that we have deferred decision to the *Pole Attachment Fee Notice* proceeding on the issue of the effect any increased burden may have on the rate the utility pole owner may charge the host attacher. As stated above, we believe that that proceeding is a more appropriate forum for resolution of this issue.[288] As also stated above, we affirm our current presumptions for the time being.

93. Some commenters have suggested that the third party overlasher should be responsible for some portion of the costs associated with overlashing and be responsible for paying a portion of the costs to the pole owner.[289] Carolina Power, et al., argue that because the third party has a statutory right under Section 224(f) to make a separate attachment of its own, overlashing should be left to negotiation.[290] They maintain that the Commission should recognize that each overlashed wire equals a separate attachment for which the overlasher may be charged a just and reasonable rate.[291] KMC Telecom asserts that the allocation of usable space should be one-half to the original attacher and the remaining one-half to the third party overlasher.[292] ICG Communications advocates the allocation of four and one-half inches of usable space to each party when one party overlashes another's cable.[293] MCI recommends sharing the presumptive one foot of space assigned to cable operators' and telecommunications carriers' pole attachments with overlashers.[294] MCI argues that because overlashing expands usable space, there should be a presumptive number of two overlashings per original attachment as an estimate of the number of overlashings.[295] MCI asks the Commission to further presume that there will be four attachments: one for a cable operator; one for the ILEC; one for an independent competitive LEC; and one for a LEC affiliated with the incumbent electric company.[296] It alleges that if there are four non-electric attachments,

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[287]*See* Ohio Edison/Union Electric Reply at 11-13; Edison Electric/UTC Comments at 25; USTA Comments at 7-8.

[288]*See* Section IV.A.1. above (Duquesne Light proposes that any presumptions include weight and wind load factors).

[289]*See, e.g.,* Duquesne Light Comments at 28. *But see* USTA Comments at 8 and SBC Comments at 9-13 (maintaining that the Commission should not establish any requirements regarding third party overlashing and that an attacher allowing a third party to overlash is sublicensing or sharing space to be occupied by the facilities owned by the third party).

[290]Carolina Power, et al., Comments at 10.

[291]*Id.* at 11.

[292]KMC Telecom Reply at 7-8.

[293]ICG Communications Comments at 21-22.

[294]MCI Comments at 6; MCI CS Docket No. 97-98 Comments at 13.

[295]*Id.*

[296]MCI Comments at 9.

and two overlashings per original attachment, the same 6.5 feet of space can presumptively accommodate 12 attachments.[297] Ohio Edison and Union Electric argue that there is no rational basis for adopting such an approach under Section 224(e)(3) because the utility pole owner is entitled to charge the attaching entity for one foot of usable space regardless of whether the original attachment is overlashed.[298]

94. We disagree with these comments suggesting that the Commission must establish the rate and the allocation of cost between the third party overlasher and the host for the use of one foot of usable space. The benefit of third party overlashing as an expeditious means for providers, including new entrants, to gain access to poles would be undermined by such procedures. Unlike the pole owner, the host attaching party generally will not have market power vis-a-vis the overlasher since the overlasher has a statutory right to make an independent attachment. Accordingly, we conclude that it is reasonable to allow the host attaching entity to negotiate the sharing of costs of usable space with third party overlashers. In such circumstances the host attaching entity will remain responsible to the pole owner for the use of the one foot of usable space but may collect a negotiated share from the third party overlasher. We have already addressed the counting of third party overlashers as a separate entity and established that if such third party provides cable or telecommunications service it will be required to pay its share of the costs of the unusable space. Further, we find that the record in this proceeding is not sufficient to embrace MCI's proposal. While overlashing is frequent, we cannot determine from the record that it is as prevalent as MCI proposes. We are reluctant to conclude that its presumptions are generally applicable. No other party has advocated a similar proposal. Moreover, we see no need to adopt MCI's proposal given our determination that there is no need to regulate the sharing of costs between the host attaching entity and the overlashing entity.

95. Regarding the leasing of dark fiber, to the extent that dark fiber is used to provide a telecommunications service within an existing attachment generally, the majority of commenters do not believe that such activity constitutes a separate attachment under Section 224.[299] As stated above in Section IV.A.4.c., we agree. The one foot presumption is therefore only applicable to the host attacher.

B. Application of Pole Attachment Formula to Telecommunications Carriers

1. Background

96. To implement the 1978 Pole Attachment Act, the Commission developed a methodology

[297]MCI Comments at 10, Table 1.

[298]Ohio Edison/Union Electric Reply at 14-15.

[299]*See, e.g.,* Edison Electric/UTC Reply at 26 (leasing of dark fiber has no impact on the amount of usable space); New York State Investor Owned Electric Utilities Comments at 10; NCTA Comments at 8 (rental of dark fiber is not an attachment).

and implementing formula to determine a presumptive maximum pole attachment rate.[300] The Commission regulates pole attachment rates by applying this formula ("*Cable Formula*")[301] to disputes between cable operators and utilities. The *Cable Formula* is based on Section 224(d)(1) that stipulates a rate is just and reasonable if it:

> . . . assures a utility the recovery of not less than the additional costs of providing pole attachments, nor more than an amount determined by multiplying the percentage of the total usable space, or the percentage of the total duct or conduit capacity, which is occupied by the pole attachment by the sum of the operating expenses and actual capital costs of the utility attributable to the entire pole, duct, conduit, or right-of-way.[302]

Currently, application of the *Cable Formula* results in a rate that is in the range between the incremental and fully allocated costs of providing pole attachment space.[303]

97. Section 703(6) of the 1996 Act amended Section 224 by adding a new subsection (d)(3). This amendment expanded the scope of Section 224 by applying the *Cable Formula* to telecommunications carriers in addition to cable systems[304] until a separate methodology is established for telecommunications carriers.[305] We invited further comment on this issue in the *Notice*.[306]

98. Congress directed the Commission to issue a new pole attachment formula under Section 224(e) relating to telecommunications carriers within two years of the effective date of the 1996 Act, to

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[300]47 U.S.C. § 224(d)(1); 47 C.F.R. §1.1409(c); *see Second Report and Order*, 72 FCC 2d at 67-75, *Teleprompter of Fairmont, Inc. v. Chesapeake and Potomac Telephone Co. of West Virginia*, PA 79-0029, 79 FCC 2d 232 (1980); *Continental Cablevision of New Hampshire, Inc. v. Concord Electric Co.*, Mimeo No. 5536 (Com. Car. Bur., July 3, 1985). Under the current methodology, cable operators providing only cable services pay a portion of both usable and unusable space on the pole. The cable cost of the usable space is directly assigned in proportion to the usable space on a pole. The cost of the unusable space is treated as an indirect cost and is assigned in the same manner as direct costs.

[301]47 U.S.C. §§ 224(b)(1), (d).

[302]47 U.S.C. § 224(d)(1).

[303]In the pole attachment context, incremental costs are those costs that the utility would not have incurred "but for" the pole attachments in question. Fully allocated costs refer to the portion of operating expenses and capital costs that a utility incurs in owning and maintaining poles that are associated with the space occupied by pole attachments.

[304]47 U.S.C. § 224(a)(4).

[305]*See* 47 U.S.C. § 224(d)(3) (only to the extent that such carrier is not a party to a pole attachment agreement).

[306]*Notice*, 12 FCC Rcd at 11737, para. 33. In the *Pole Attachment Fee Notice*, the Commission inquired about certain technical changes proposed for the *Cable Formula*. *Pole Attachment Fee Notice*, 12 FCC Rcd 7449, generally. Certain changes, if adopted, may require technical corrections to the *Cable Formula* and new formula. We will examine these issues in the separate rulemaking.

become effective five years after enactment.[307] In the 1996 Act, Section 224(e)(1) provided:

> The Commission shall . . . prescribe regulations in accordance with this subsection to govern charges for pole attachments used by telecommunication carriers to provide telecommunications services, when the parties fail to resolve a dispute over such charges. Such regulations shall ensure that a utility charges just, reasonable, and nondiscriminatory rates for pole attachments.[308]

99. In the *Notice*, the Commission proposed to modify the *Cable Formula* to accommodate the two statutory components added by the 1996 Act[309] and to develop a maximum pole attachment rate for telecommunications carriers.[310] These components dictate separate calculations for the equal apportionment of unusable space[311] and the allocation of a percentage of usable space.[312]

100. In paragraphs 41 and 78 above, the Commission affirms its proposals to use certain formulas implementing Section 224(e)(2) and Section 224(e)(3) respectively. The formula for Section 224(e)(2) establishes the unusable space factors for telecommunications carriers,[313] premised on an equal apportionment of two-thirds of the costs of providing unusable space on the utility facility.[314] The formula for Section 224(e)(3) establishes the usable space factors for cable operators and telecommunications carriers providing telecommunications services,[315] premised on the percentage of usable space required for

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[307]47 U.S.C. § 224(e)(1).

[308]47 U.S.C. § 224(e)(1).

[309]*See* 47 U.S.C. § 224(e)(2), (e)(3).

[310]*Notice*, 12 FCC Rcd at 11737, para. 33.

[311]47 U.S.C. § 224(e)(2).

[312]47 U.S.C. § 224(e)(3).

[313]For allocating the cost of unusable space to telecommunications carriers, see discussion at paragraphs 43-44 above for the following basic formula:

$$\text{Unusable Space Factor} = \frac{2}{3} \times \frac{\text{Unusable Space}}{\text{Pole Height}} \times \frac{\text{Net Cost of Bare Pole}}{\text{Number of Attachers}} \times \text{Carrying Charge Rate}$$

[314]See discussion on Unusable Space at Section IV above.

[315]For allocating the cost of usable space for telecommunications carriers, see discussion at paragraphs 80-82 above for the following basic formula:

$$\text{Usable Space Factor} = \frac{\text{Space Occupied by Attachment}}{\text{Total Usable Space}} \times \frac{\text{Total Usable Space}}{\text{Pole Height}} \times \text{Net Cost of Bare Pole} \times \text{Carrying Charge Rate}$$

the attachment on the utility facility.[316]

101. AT&T observes that there was almost unanimous support from cable operators and telecommunications carriers for the Commission's proposed telecommunications carrier pole attachment rate formula.[317] Several utility pole owners support the Commission's use of its proposed modified formula, but advocate the use of gross book instead of net book costs.[318] American Electric, et al., advocate that when applied the formula should use forward-looking/replacement costs.[319] Attaching entities urge the Commission to reject the pole owners' call for replacement costs designed to maximize pole attachment rates.[320]

2. Discussion

102. We agree with cable operators and telecommunications carriers that the continued use of a clear formula for the Commission's rate determination is an essential element when parties negotiate for pole attachment rates, terms and conditions.[321] We think that a formula encompassing these statutory directives of how pole owners should be compensated adds certainty and clarity to negotiations as well as assists the Commission when it addresses complaints. We conclude that the addition of the unusable and usable space factors, developed to implement Sections 224(e)(2) and (e)(3), is consistent with a just, reasonable, and nondiscriminatory pole attachment rate for telecommunications carriers. We affirm the following formula, to be used to determine the maximum just and reasonable pole attachment rate for telecommunications carriers, including cable operators providing telecommunications services, effective February 8, 2001, encompassing the elements enumerated in the law:

Maximum Rate = Unusable Space Factor + Usable Space Factor

C. Application of Pole Attachment Formula to Conduits

1. Background

103. Conduit systems are structures that provide physical protection for cables and also allow new cables to be added inexpensively along a route, over a long period of time, without having to dig up the streets each time a new cable is placed. Conduit systems are usually multiple-duct structures with

[316]See discussion on Usable Space at Section IV above.

[317]*See* AT&T Reply at 15.

[318]*See, e.g.,* Bell Atlantic Comments at 4; Colorado Springs Utilities Comments at 4; SBC Comments at 29-30; USTA Comments at 10.

[319]*See* American Electric, et al., CS Docket No. 97-98 Comments at 42-45.

[320]*See, e.g.,* ICG Communications Reply at 26-27, NCTA Reply at 6-8.

[321]*See, e.g.,* USTA Reply at 2; *But see* GTE Reply at 4-5.

standardized duct diameters. The duct diameter is the principal factor for determining the maximum number of cables that can be placed in a duct. Conduit is included in the definition of pole attachments,[322] therefore, the maximum rate for a pole attachment[323] in a conduit for telecommunications carriers must be established through separate allocations relating to unusable space[324] and usable space.[325] In the *Notice*, the Commission sought comment on the differences between conduit owned and/or used by cable operators and telecommunications carriers and conduit owned and/or used by electric or other utilities[326] to determine if there are inherent differences in the safety aspects or limitations between the two which should affect the rate for these facilities as discussed below.[327] The Commission sought comment on the distribution of usable and unusable space within the conduit or duct and how the determination for this space is made.[328] Where conduit is shared, we sought information on the mechanism for establishing a just and reasonable rate.[329]

104. Section 224(e)(2) requires that two-thirds of the cost of the unusable space be apportioned equally among all attaching entities.[330] In the *Notice*, the Commission proposed a methodology to apportion the costs of unusable space among attaching entities.[331] The following formula was proposed as the methodology to determine costs of unusable space in a conduit:

$$\text{Conduit Unusable Space Factor} = \frac{2}{3} \times \frac{\text{Net Linear Cost of Unusable Conduit Space}}{\text{Number of Attachers}} \times \text{Carrying Charge Rate}$$

In the *Notice*, the Commission also sought comment on what portions of duct or conduit are "unusable" within the terms of the 1996 Act.[332] The Commission proposed that a presumptive ratio of usable ducts

[322]47 U.S.C. § 224(a)(4).

[323]47 U.S.C. § 224(e)(1).

[324]47 U.S.C. § 224(e)(2).

[325]47 U.S.C. § 224(e)(3).

[326]The issues regarding conduit systems were initially raised by the Commission in the *Pole Attachment Fee Notice*, 12 FCC Rcd 7449 at paras. 38-46.

[327]*Notice*, 12 FCC Rcd at 11739, para. 36.

[328]*Id.*

[329]*Id.*

[330]47 U.S.C. § 224(e)(2).

[331]*Notice*, 12 FCC Rcd at 11740, para. 40.

[332]*Id.*

to maintenance ducts be adopted to establish the amount of unusable space.[333]

105. Section 224(e)(3) states that the cost of providing usable space shall be apportioned according to the percentage of usable space required for the entity using the conduit.[334] Usable space is based on the number of ducts[335] and the diameter of the ducts contained in a conduit.[336] In the *Pole Attachment Fee Notice*,[337] the Commission sought comment on a proposed conduit methodology for use in determining a pole attachment rate for conduit under Section 224(d)(3).[338] In the *Notice*, the Commission sought comment on a proposed half-duct methodology for use in a proposed formula to determine a conduit usable space factor.[339] The proposed usable space formula under Section 224(e)(3) for pole attachments in conduits is as follows:

$$\text{Conduit Usable Space Factor} = \frac{1}{2} \times \frac{1 \text{ Duct}}{\text{Average Number of Ducts, less Adjustments for maintenance ducts}} \times \text{Net Linear Cost of Usable Conduit Space} \times \text{Carrying Charge Rate}$$

In the *Notice*, the Commission sought comment on the half-duct presumption's applicability to determine usable space and to allocate costs of providing usable space to the telecommunications carrier.[340] The Commission also sought comment on how its proposed conduit methodology impacts determining an appropriate ratio of usable to unusable space within a duct or conduit.[341]

106. As with poles, defining what an attaching entity is and establishing how to calculate the number of attaching entities in conduit is critical. Consistent with the half-duct convention proposed in the *Pole Attachment Fee Notice*,[342] the Commission stated that each entity using one half-duct should be

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[333] *Id.*

[334] 47 U.S.C. § 224(e)(3).

[335] NESC defines the term "duct" as a single enclosed raceway for conductors or cable. NESC at Section 32.

[336] *Notice*, 12 FCC Rcd at 11739, para. 38.

[337] *Pole Attachment Fee Notice*, 12 FCC Rcd 7449 at paras. 43-46.

[338] 47 U.S.C. § 224(d)(3).

[339] *Notice*, 12 FCC Rcd at 11739, para. 38.

[340] *Id.* at 11739-40, para. 39.

[341] *Id.* at 11740, para. 40.

[342] *Pole Attachment Fee Notice*, 12 FCC Rcd 7449 at para. 45.

counted as a separate attaching entity.[343] The Commission sought comment on this method of counting attaching entities for the purpose of allocating the cost of the unusable space consistent with Section 224(e).[344] The Commission also sought comment on the use an attaching entity may make of its assigned space, including allowing others to use its dark fiber in the conduit.[345]

2. Discussion

a. Counting Attaching Entities for Purposes of Allocating Cost of Other than Usable Space

107. For the purpose of allocating the cost of unusable space, ICG Communications states that each party that actually installs one or more wires in a duct or duct bank should be counted as a single attaching entity, regardless of the number of cables installed or the amount of duct space occupied.[346] Section 224(e)(2) states that the costs of unusable space shall be allocated ". . . under an equal apportionment of such costs among all attaching entities."[347] We agree that each party that actually installs one or more wires in a duct or duct bank should be counted as a single attaching entity, regardless of the number of cables installed or the amount of duct space occupied. The statutory preference for clarity is preeminent and we perceive no generally applicable method that does not involve complexity and confusion other than counting each entity within the conduit system as a separate attaching entity.

b. Unusable Space in a Conduit System

108. Carolina Power, et al., assert that the only usable space is the duct itself, because the surrounding structure and supportive infrastructure of the duct is the unusable space.[348] To allocate the cost of the unusable space, they argue that two-thirds of the costs involved in constructing a conduit system should be apportioned among attaching entities.[349] These utility conduit owners reason that the structure surrounding a conduit system exists to make other parts of the system usable in the same way

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[343] *Notice*, 12 FCC Rcd at 11740, para. 41.

[344] *Id.*

[345] *Id.*

[346] *See* ICG Communications Comments at 55; *see also* Edison Electric/UTC Comments at 29. *But see* Ameritech Comments at 15.

[347] 47 U.S.C. § 224(e)(2).

[348] Carolina Power, et al., Comments at 16; *see also* American Electric, et al., Comments at 53.

[349] These costs typically include obtaining permits, excavating rock, shoring trench sides and treating subsurfaces. Carolina Power, et al., Reply at 6.